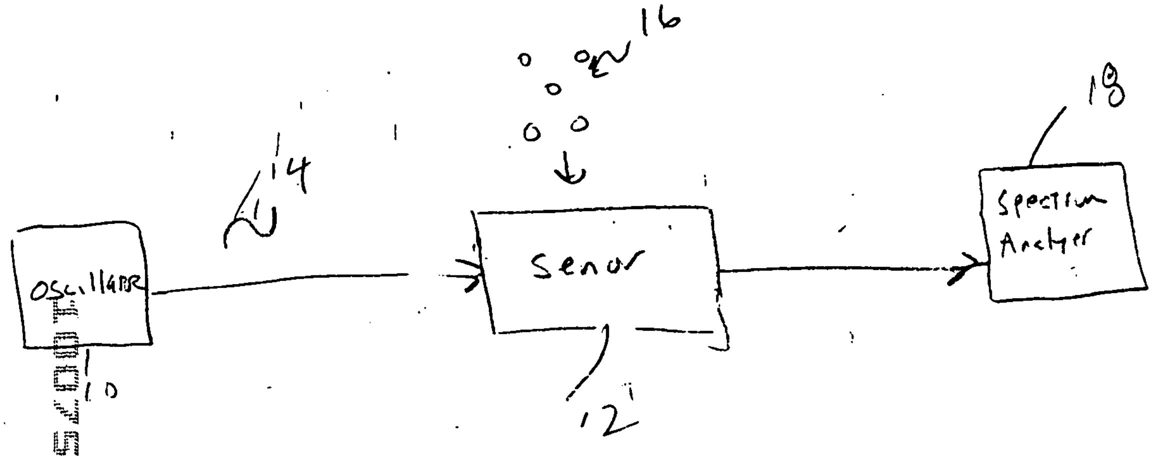

Fig 1 (PRIOR ART)

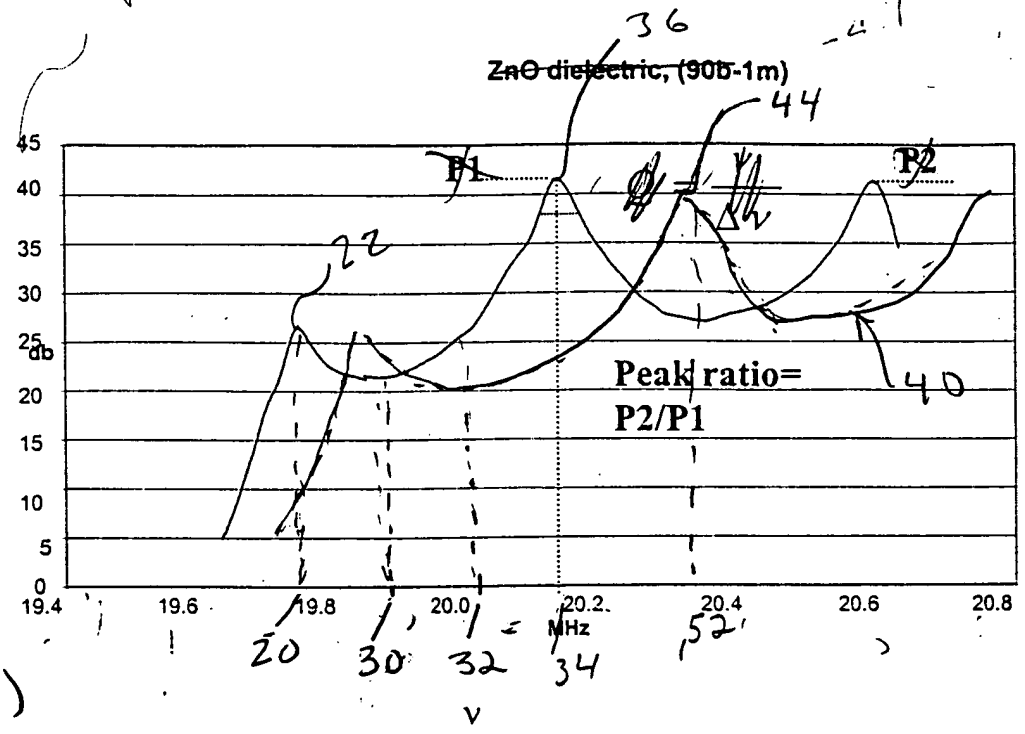

Fig 2
(PRIOR ART)

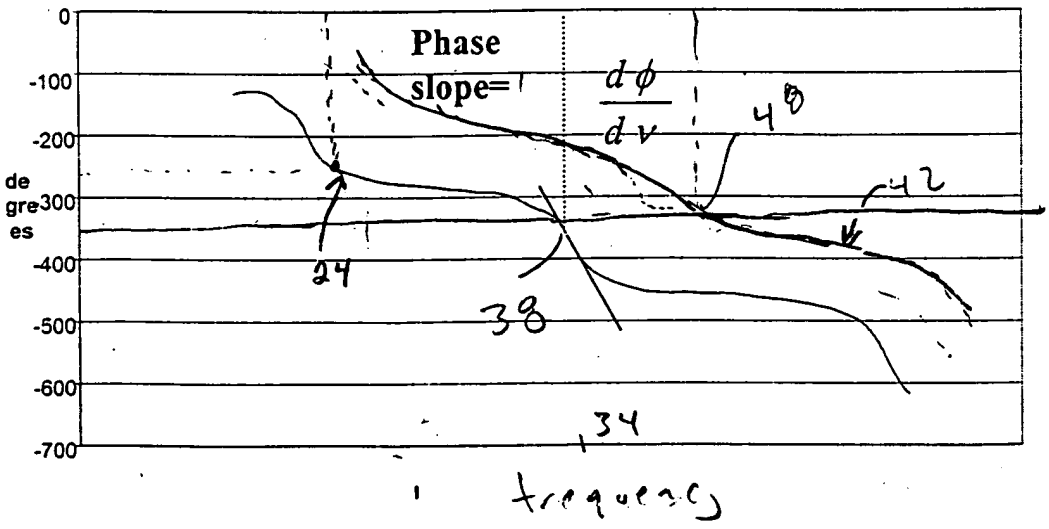

Fig 3
(PRIOR ART)

Figure 1: Transmitted magnitude and phase response of an FPW sensor

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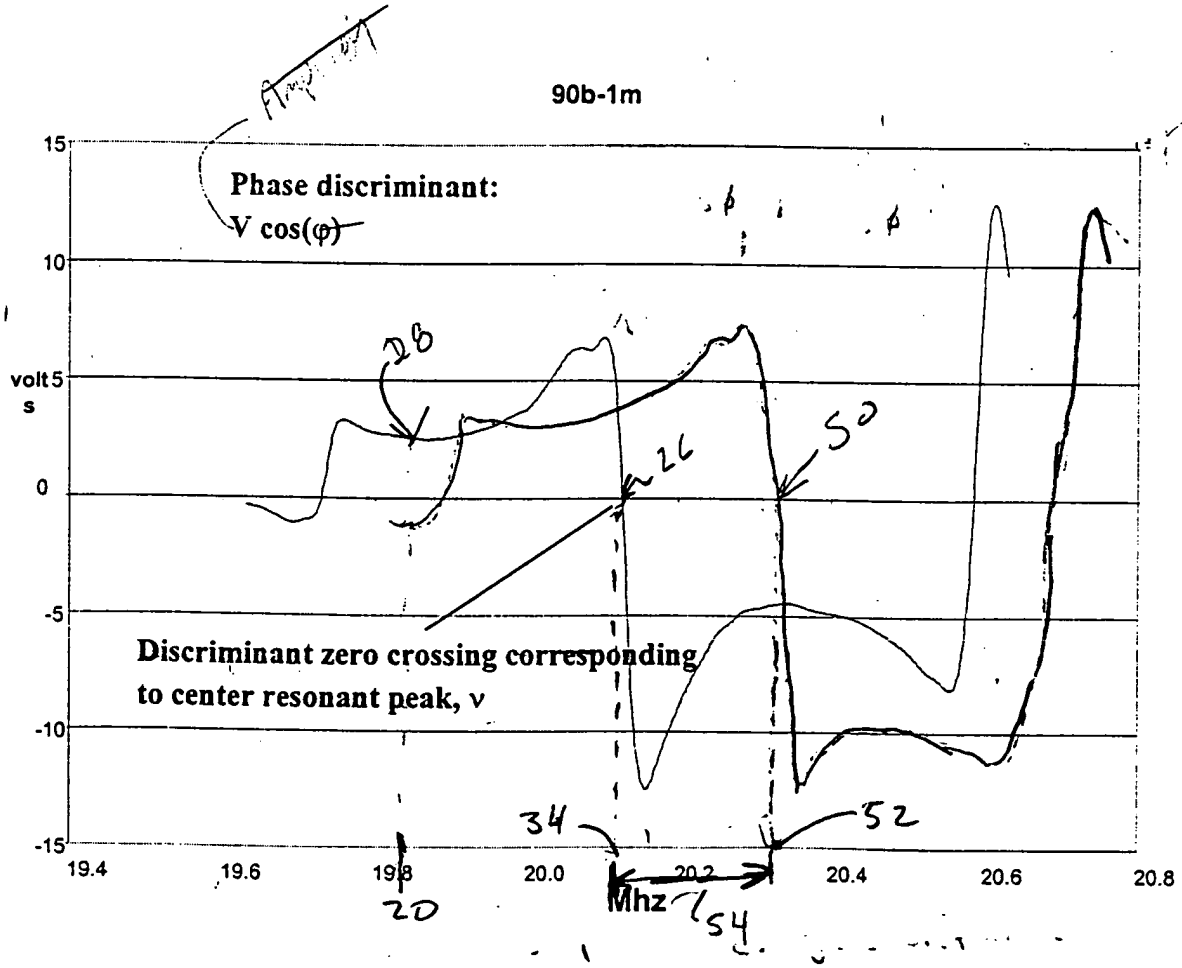
$f(t) = A \cos \omega t$

$f(\theta) = A \cos \theta$ describes waveform



~~Figure 3.~~ Derived sensor response used in the ~~phase locked oscillator readout circuit~~

FIG 4 (PRIOR ART)

4 6 7

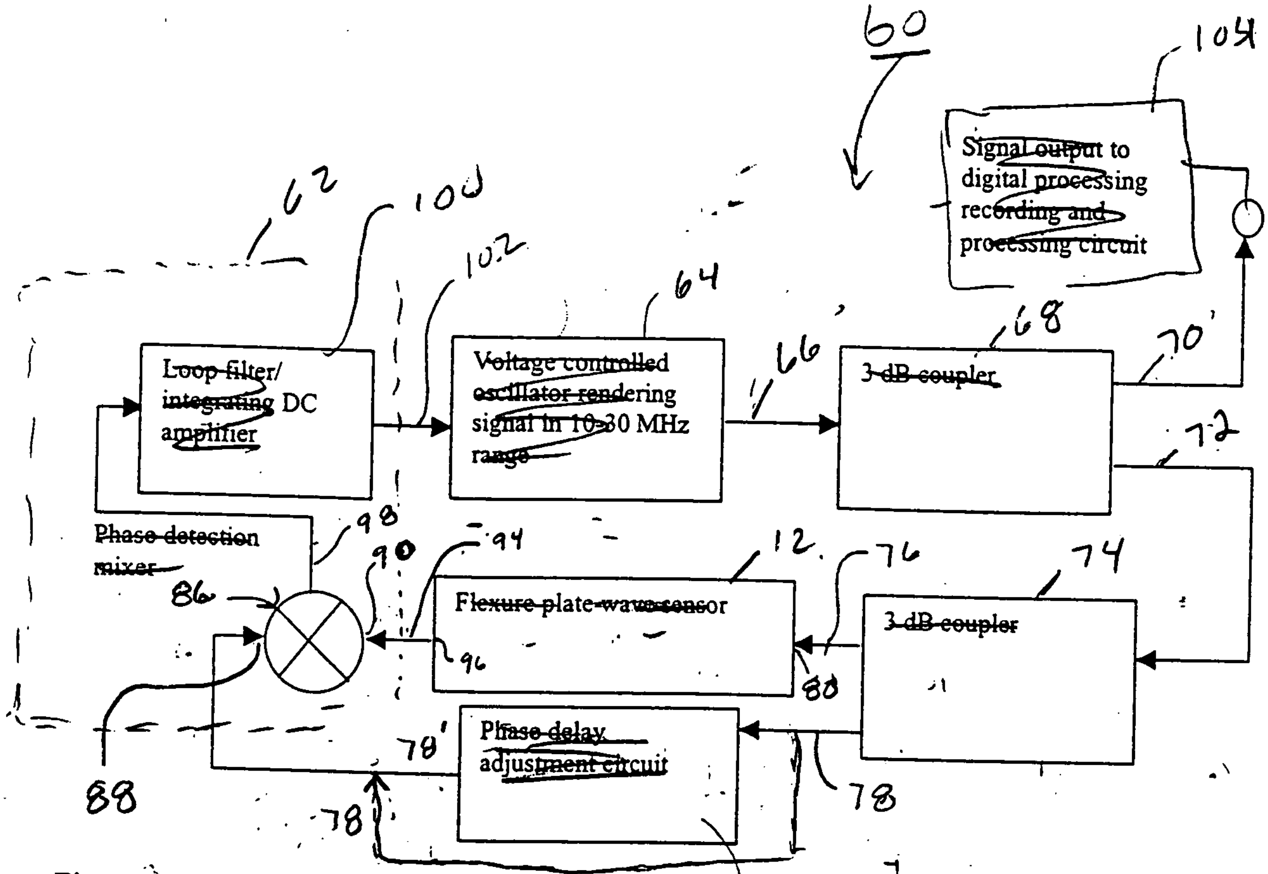


Figure 3: Basic Flexure Plate Wave resonator readout circuit with frequency signal output

Fig 5 82

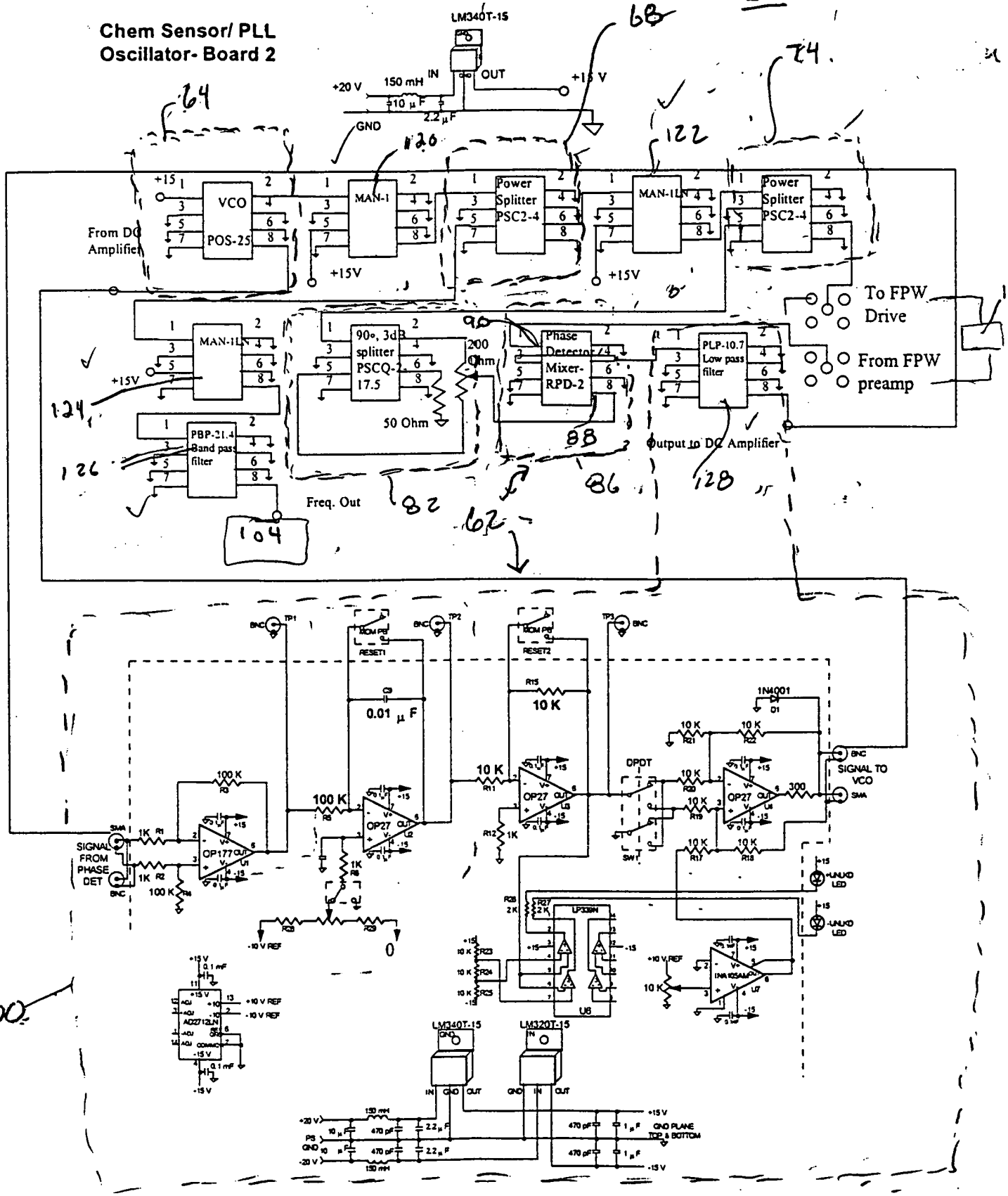


Figure A-1:Phase locked oscillator circuit applied to reading out silicon FPW.

Fig 6.

667

60''

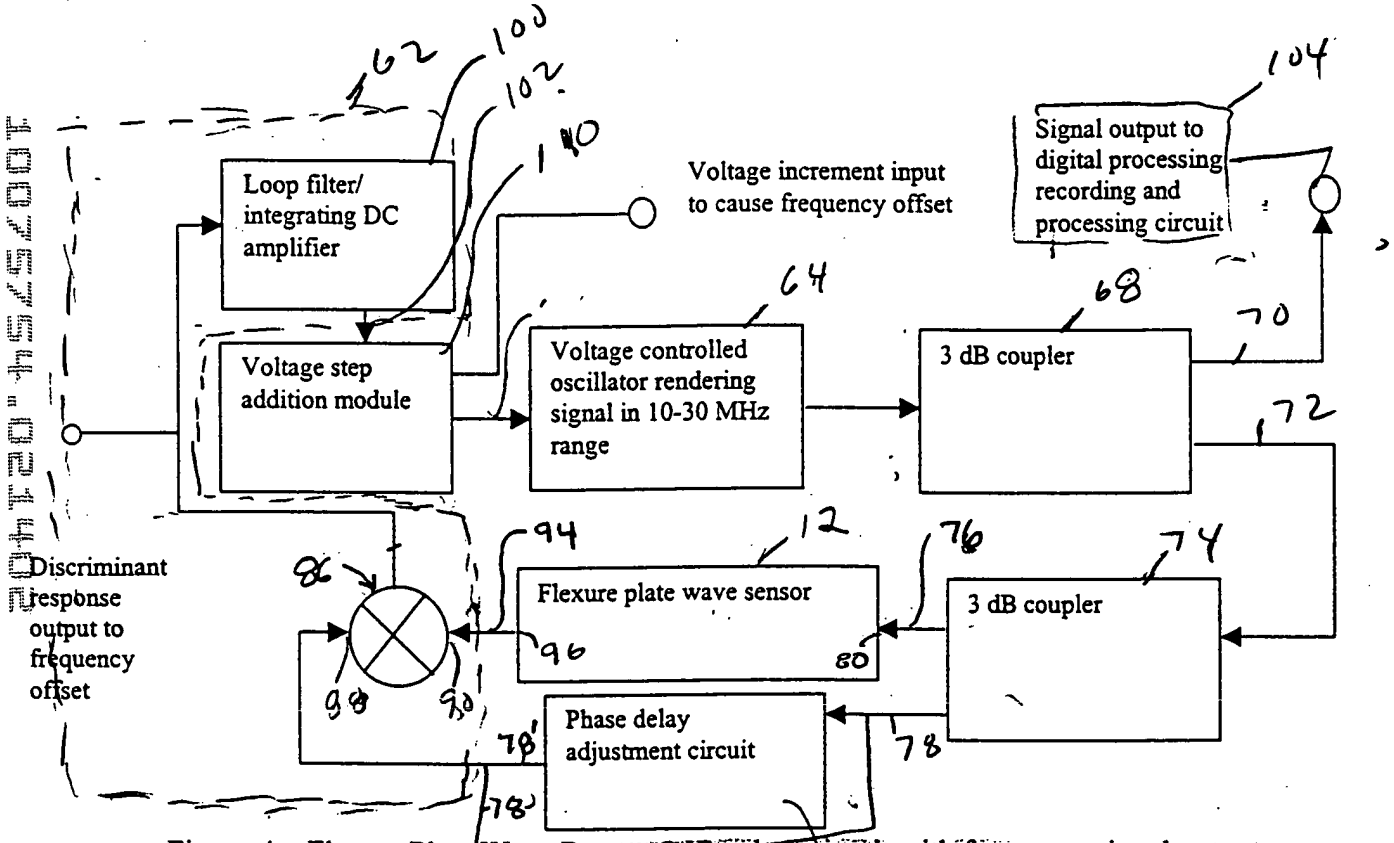


Figure 4: Flexure Plate ~~Wave Resonator Readout circuit with frequency signal output~~ and resonant peak Q ~~measurement implementation~~

Fig 7.

747

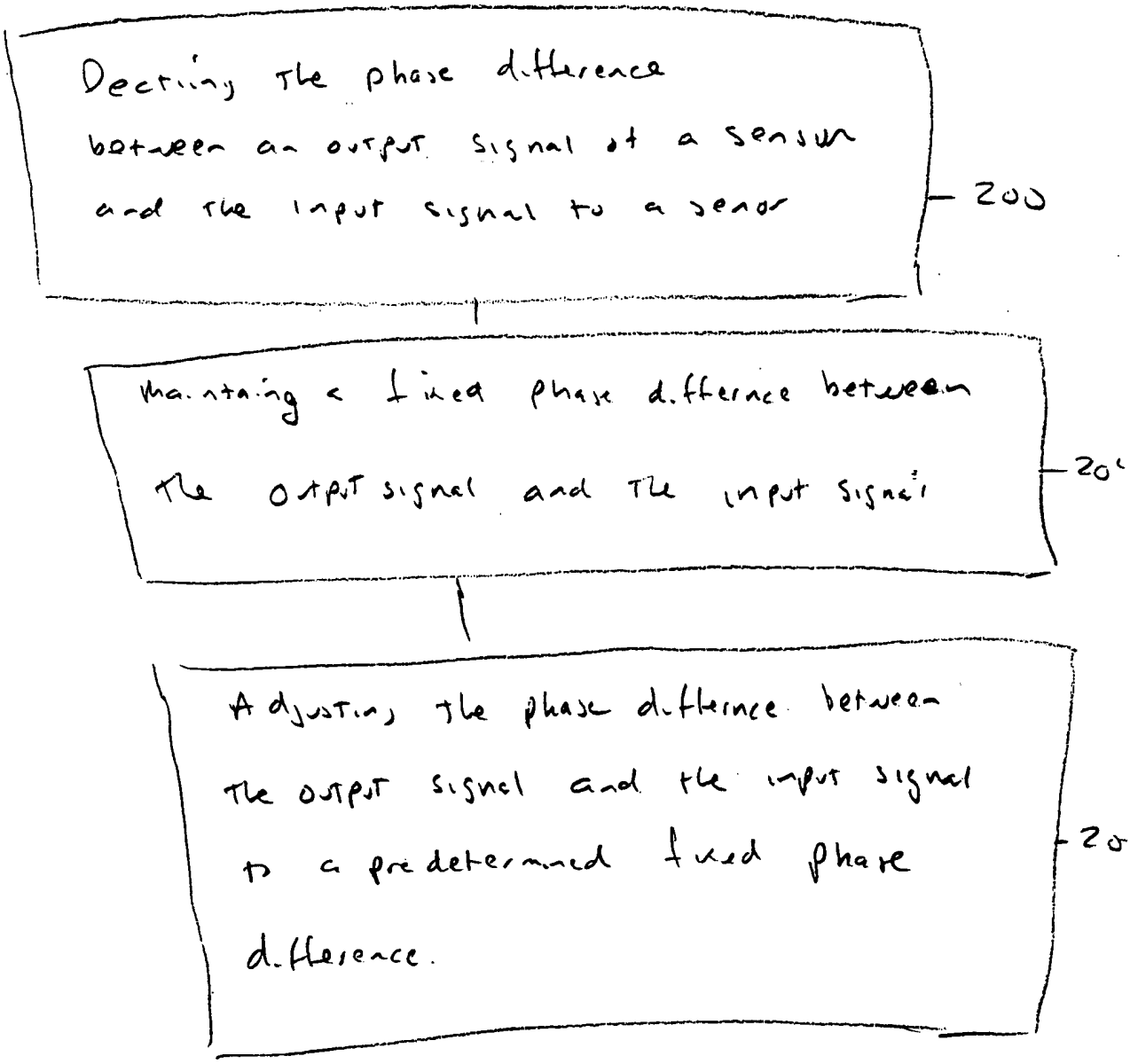

Detecting the phase difference between an output signal of a sensor and the input signal to a sensor
200
Maintaining a fixed phase difference between the output signal and the input signal
20
Adjusting the phase difference between the output signal and the input signal to a predetermined fixed phase difference.
20

Fig. 8